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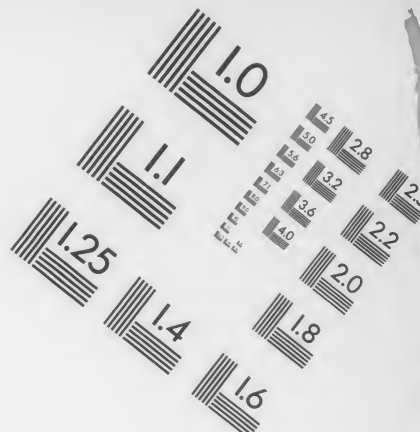
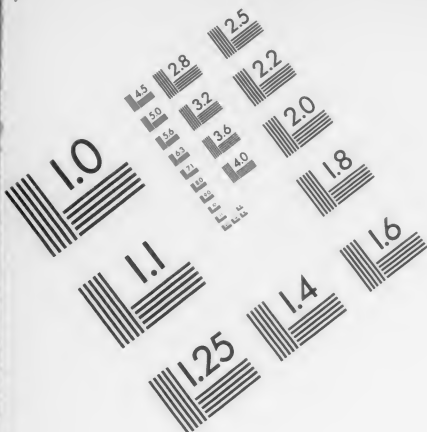


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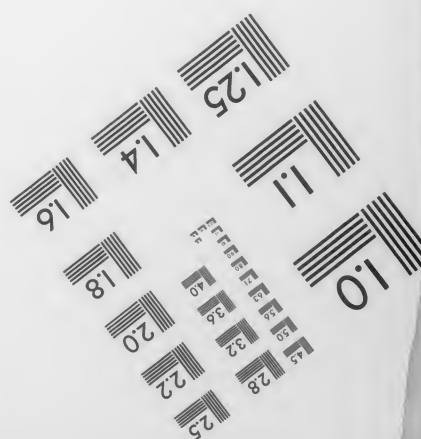
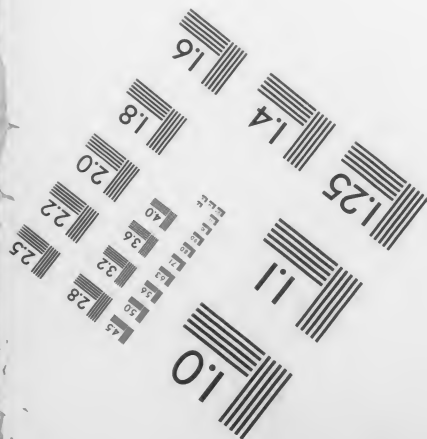
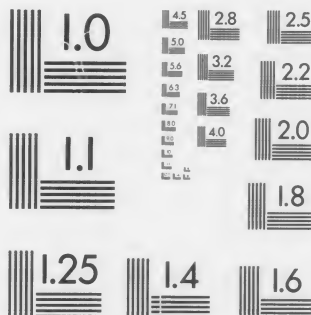
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**IS VIVISECTION RIGHT, AND IS IT  
WORTH THE COST ?**

BY

**L. A. BRITTON.**

SPRINGFIELD, VERMONT.

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**THREE HUNDRED DOLLAR PRIZE ESSAY  
AGAINST VIVISECTION.**

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(PRIZE WAS OFFERED BY GEORGE T. ANGELL.)



**N. E. Anti-Vivisection Society**  
TREMONT TEMPLE,  
BOSTON, - - - MASS.

1908

THREE HUNDRED DOLLAR PRIZE ESSAY  
AGAINST VIVISECTION.

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IS VIVISECTION RIGHT, AND IS IT  
WORTH THE COST ?

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Written by L. A. BRITTON, Springfield, Vermont.





### IS VIVISECTION RIGHT, AND IS IT WORTH THE COST ?

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THE object of this article is not to bandy words with professional and learned men, but to state as simply as possible in the speech of the people some thoroughly authenticated facts in regard to vivisection, which even the scornfully derided "uninformed" layman may understand.

From days of old, humanity has been continually running about seeking after some new thing. A few years ago certain honored experts commenced to wield the knife with a boldness hitherto unknown. Their pace was quickly taken by surgeons of less degree, and soon every country physician was operating with fatal results upon many cases not operable in the light of a better knowledge and training.

The powerful influence of much talking and thinking along a given line of investigation was evinced in the facility with which certain maladies became a fad in the profession. For a time tonsils were thought superfluous and were consequently removed. Then

it was the uvula that the Lord had blundered in creating. My native town had for several years a startlingly large obsession of tumors. Now the number of inhabitants possessing an appendix must be exceedingly small.

Vivisection has struggled for and obtained place in every State of the Union, sometimes even in high and grammar schools where a teacher has been known to boast that she could teach more physiology in a few minutes with a cat and a jackknife than in any other way.

We are told that the cause of science is at stake. Young men beginning the study of medicine are shamed out of all naturally humane feeling toward the pitiable objects of vivisection by stern professors who quote to them the words of M. de Cyon: "The true vivisector must approach a difficult vivisection with the same joyful excitement, and the same delight, wherewith a surgeon undertakes a difficult operation, from which he expects extraordinary consequences. He who shrinks from cutting into a living animal, he who approaches a vivisection as a disagreeable necessity, may very likely be able to repeat one or two vivisections, but will never become an artist in vivisection. He who cannot follow some fine nerve-thread, scarcely visible to the naked eye, into the depths, if possible sometimes tracing it to a new branching, with joyful alertness for hours at a time; he who feels no enjoyment when at last parted from its surroundings and isolated, he can subject that nerve to electrical stimulation; . . . to such a one there is wanting what is most necessary for a successful vivisector."

And is this exquisite enjoyment produced by operating upon a dead or even senseless animal? By no means. In the face of all protestations to the contrary the weight of the evidence goes to prove that

the anæsthetic is seldom used, that curare which paralyzes motion while it increases sensibility is the only effective means of quieting the struggles of suffering victims without ending their torment by death. And worse than all this, many dogs, after being practically used up by experiments, are turned loose on the street, still groaning, bleeding, and mangled.

Before we allow our sympathies to become too much aroused, let us ask what the advancement of science really owes to the sufferings of dumb animals.

Vivisectionists openly claim that their practices are justified by their sincere purpose to make new discoveries in the science of medicine, to acquire dexterity in surgery, and by the necessity for demonstration of facts before classes.

Their first point is well taken if the end attained has justified the means. Let us turn to the medical profession for light on this subject. We find that at the present time many distinguished surgeons who have practiced vivisection in past years declare its actual definite results useless.

Dr. Carpenter, though a vivisectionist, says that the insulation of any one organ destroys the conditions under which its functions can be normally performed. Observations of such phenomena, not of nature, but of the ruthless work of operators under the protection of medical science, have led to experiments upon human beings which have been fatal. The difference in species makes deduced conclusions in the one case a hidden trap for fatal results in the human being.

Sir Charles Bell makes this statement: "The opening of animals has done more to perpetuate error than to confirm the just views taken from the study of anatomy."

The late Sir Lawson Tait, Fellow of the Royal College of Surgeons, who is so frequently quoted as high authority in surgery, declared that "Experiments on animals did and could teach nothing; for operations have been performed on thousands of animals every year for centuries, and nothing whatever has been learned from this wholesale vivisection."

The late Prof. Henry J. Bigelow of Harvard spoke of cold-blooded cruelties practiced more and more in the name of science. He also said, "There is little in the literature of what is called the horrors of vivisection which is not well grounded on truth. . . . Vivisection is not an innocent study. . . . Vivisection will always be the better for vigilant supervision, for whatever outside pressure can be brought to bear against it. Such pressure will never be too great, nor will it retard progress a hair's breadth in the hands of that very limited class who are likely materially to advance knowledge by its practice. . . . A torture of helpless animals — more terrible, by reason of its refinement and the effort to prolong it, than burning at the stake, which is brief, — is now being carried on in all civilized nations, not in the name of religion, but of science. . . . The law should interfere. There can be no doubt that in this relation there exists a case of cruelty to animals far transcending in its refinement and in its horrors anything that has been known in the history of nations. There will come a time when the world will look back to modern vivisection in the name of science as they now do to burning at the stake in the name of religion."

This testimony comes from Sir Benjamin Ward Richardson, M. D., F. R. S.: "Pain, when it is excited and sustained in any animal, obscures and falsifies for the time all the other vital phenomena which admit of investigation. . . . In plain words, it is

utterly impossible to observe natural function under the shadow of pain either in man or animal, for he who tries to observe under such circumstances must make so many allowances for the circumstances under which he is observing it, he finds it extremely difficult, if even it be possible, to be precise in his conclusions."

George Wilson, M. D., LL.D., said before a medical association: "After all these long years of flickering hope, I am prepared to contend that the indiscriminate maiming and slaughter of animal life with which these bacteriological methods of research and experimentation have been inseparably associated, cannot be proved to have saved one single human life or lessened in any appreciable degree the load of human suffering."

Sir Thomas Watson, one of the greatest physicians that ever lived, said not long before he died, that young men had to unlearn at the bedside what they had learned in the laboratory.

The late Prof. James E. Garretson, M. D., Senior Professor of Surgery, Medico-Chirurgical College, Philadelphia, said: "I am without words to express my horror of vivisection, though I have been a teacher of anatomy and surgery for thirty years. It serves no purpose that is not better served after other manners."

Notice that this condemnation comes from the medical profession, not from "uninformed" laymen. Over three hundred Massachusetts physicians have given their names as openly opposed to vivisection, and a much larger number are in favor of restriction, while a long list of English, French, German, and American doctors, high in their profession, declare against the value of any benefit coming to the human race by the vivisection of animals.

We have the most conclusive proof of all in the fact that vivisectionists themselves have turned from their assertion that they sacri-

fice animals in order *not* to vivisect human beings, and now claim that as animal vivisection is unsatisfactory they must have the capital criminal class of human subjects to work upon.

What rights remain to the vivisectible public if the "untrammelled science" of such men prevails?

In England a petition, nine miles in length, weighing one-quarter of a ton, and signed by over four hundred thousand persons, asking for further legislation on this subject, has recently been presented to the House of Commons.

Surely these facts would indicate that the so-called discoveries of vivisectionists have little or no value in the eyes of many intelligent men of to-day.

Harvey is said by vivisectionists to have discovered the true circulation of the blood by vivisection, but by his own assertion we are informed that he was first led to the discovery by anatomical observation. The direct inspection claimed from numerous experiments could not result in the verification of the theory. The same false claim is made for Sir Charles Bell's discovery of the functions of the anterior and posterior nerves, but he himself denies the statement.

Dr. Charles Bell Taylor, of London, thus disposes of another claim of vivisectionists: "Galvani's discovery of electricity was due to experiments on dead frogs, not on living animals. Vivisection had nothing whatever to do with it." And again: "The anæsthetic properties of ether and chloroform were discovered by experiments upon human patients, not by vivisection of animals."

Liebig was, I believe, the discoverer of chloroform, and Dr. Simpson first experimented upon himself and his friends, Drs. Keith and Duncan, who all became insensible under the test.

Now the study of bacteria has become a profession in itself. Let us hope that this scientific "fad" has reached its limit and that enthusiastic students are becoming more and more ready to study health, not disease; to eliminate germs, not breed new species, and above all to cease this senseless creation of suffering to no purpose unless perhaps to furnish a new office dependent upon our city treasuries.

Let us investigate briefly a few of the diseases to which bacteriologists have given the most attention. The dangers of tuberculosis, the white plague, are known more or less scientifically to the majority of people to-day. A few years ago great interest was excited by Dr. Koch's so-called consumption cure, and although he himself declared that the use of the lymph was dangerous, much faith was placed in this discovery, and it was loudly proclaimed as the chief triumph of vivisection. In the beginning of the twentieth century no physician is so hopelessly behind the times as to advocate the inoculation cure for a disease which is now more perfectly understood and more often overcome than was deemed possible in the day of Dr. Koch's lymph agitation. What a siege of pitiful suffering caused by an incalculable amount of useless experimentation has intervened between that period and the present advanced views of physicians! What senseless fear has been sown broadcast in the minds of the ignorant in the endeavor to educate the masses to the germ theory! A London physician states that probably more children and people generally die from not drinking enough milk than from drinking impure milk, bacteriologists and veterinary doctors to the contrary.

Statistics show that tuberculosis is decreasing in the city of New York; controlled by what? *Not* by information gained by vivisection.

tion, but by municipal legislation. The death rate from this disease has fallen from 29.1 per 10,000 in 1892, to 22.8 per 10,000 in 1902. This rapid decrease in mortality from "the white plague" in New York is ascribed to a system of notification in operation since 1893, to the better mode of life of the people, and to the application of modern sanitary methods of prevention. Dr. Collins H. Johnston, in a paper before the State Medical Society of Michigan proves by statistics that, "The eradication of pulmonary tuberculosis is the most important sanitary problem of to-day." This sanitary problem will be solved by sunlight, fresh air, and good food, not by creating disease in animals. The Royal Commission of London is now collecting evidence from observations of human subjects in order that they may untangle the mass of error created by conclusions drawn from experiments tried by inoculation of animals.

Valuable statistics have been obtained from microscopical studies made in connection with autopsies on human bodies; and this way, namely, *post mortem* examination, is the right and only method of investigating this disease for reasons connected with germ growth which are known to the profession, and which make studies by vivisection entirely useless in drawing conclusions concerning the tubercle bacillus. Thus what has been claimed by vivisectionists as "the most brilliant vindication of vivisection," the lymph discovered by Dr. Koch, means little or nothing to medical science to-day.

The vivisectionist formerly claimed that experimentation had led up to the anti-toxin treatment which was expected to lessen the fatality of diphtheria. This, however, has not been the case. During three years in which anti-toxin was in use in the city of London the death rate from diphtheria per million population was more than three times as high as that which prevailed during seventeen years

from 1865 to 1881 inclusive. These are figures copied from government reports which are made in England with an accuracy not yet attempted in America. More people died last year from diphtheria in England and Wales than in any of the ten years before anti-toxin was introduced, while one-fourth as many died from vaccination as died from the small-pox. From the mortality returns we find that the period from 1885 to 1894 shows a mortality from diphtheria of 200 per million persons living, while the period from 1895 to 1904 shows 235 per million. Numbers of physicians have advocated and faithfully tried the serum treatment, but now have become opposed to it and have given convincing proofs of its utter uselessness and injurious effects. Cleanliness versus the anti-toxin fetish, says the latest most scientifically cultured medical authority.

Pasteurism has probably caused many horrible deaths, and it is honestly doubted whether Pasteur's method has ever done more than simply fail to destroy the strong recuperative tendencies of nature. Hydrophobia was a rare disease until Pasteur gave it prominence and notoriety, and contributed cases for study. Dr. Charles Bell Taylor said in an address before a society of physicians, that more than 2,200 persons have perished from being inoculated with rabid matter. Professor Tait spoke in the strongest terms against Pasteur's remedy for hydrophobia and Koch's remedy for consumption. In this connection he said in part: "I urge against vivisection the strong argument that it has proved useless and misleading; that in the interest of true science its employment should be stopped, so that the energy and skill of scientific investigators should be directed into better and safer channels."

One shudders involuntarily at the mere thought of the infernal tortures to which dogs and rabbits in large numbers are daily sub-

jected in order to keep up a supply of virus which again creates more suffering in human beings than it allays. And plain hot water has saved many who were so fortunately poor in purse that they might not attempt to reach Pasteur or his disciples.

Vivisectors have made many boasts in regard to the carbolic ligature, but Professor Tait wrote, "If the carbolic ligature had never been tried on animals, where it seems to answer admirably, it would never have been tried on human patients, where it failed miserably and has cost many lives."

Last March Dr. Bashford of Edinburgh, appointed to investigate the subject by the Imperial Cancer Research Society, after sacrificing more than one hundred thousand mice and other animals, reported what all people of common sense have believed and accepted *without* study, that cancer formations are due to mal-nutrition; that there is no germ and consequently no opportunity for further scientific recreation in hunting after a serum. Notice that while London experimenters after careful study declare that no conclusive results appear, the boom in trypsin as a cure for cancer is still actively supported by New York vivisectors. Why? That they may continue their useless investigations without censure.

Cholera is another disease under investigation by vivisectionists, and ten prisoners who were recently inoculated with anti-cholera serum at Manila by the government physicians died from the treatment.

Is not this carrying free experimentation a little too far even for our laws?

We have not space to refute in detail the claims of those distinguished students of science who have made such a fruitless search after knowledge which has never come, and while waiting for the

wisdom which lingers, have sacrificed countless animals and have caused untold suffering.

We see that the claim of vivisectionists that contagion has been checked and epidemics averted by these investigations is false.

Most middle-aged physicians were brought up in the profession in the belief that many important methods of prolonging human life had been learned from experiments on the lower animals, but at the present time we are thankful to assert that a large and increasing number claim that vivisection has in no sense aided the physician or surgeon, but on the contrary has often misled him. For the difference in structure between the human being and the animal makes the vivisection of animals worse than useless as a preparation for work upon the human body. An authority of undisputed eminence said: "But for the fallacies of vivisection, the Healing Art would now be a century in advance of its present position to-day."

If the question were the settlement once for all of a mooted point in scientific circles little outcry would be made (provided that the pet sacrificed were not yours or mine), but the gradual growth of opinion among medical men seems to give abundant testimony that little or no exact information beneficial to the human race has come from all the pitiless, cruel suffering inflicted so unnecessarily in the past, and there is little ground for belief that anything worth while *will* come from such experimenting in the future. And these experiments are not confined to the truly scientific effort to establish some new principle or truth. Animals by the thousand are tortured and sacrificed daily to demonstrate facts which every child knows absolutely.

In support of their practices the physicians and surgeons who have honestly conceived it part of their professional duty to calmly

deceive the wife, husband, father, mother, or child, about the truth of the disease which threatens their loved one, now boldly deceive the public about the cruelty of the hidden proceedings of the laboratory, seeking to allay the troublesome fears of an excited public by a play upon words calculated to mislead the "uninformed" and ignorant layman.

Let us investigate the so-called painlessness of laboratory experimentation. First, we will ask the question, Why the vigorous contention by vivisectionists against legislation in the United States if no pain beyond "that of a mere pin-prick is inflicted," when all that has been demanded is the elimination of suffering? By this pin-prick many animals are inoculated with disease, to linger in pitiful suffering for months in order that the progress of the disease under investigation may be minutely studied.

Allusion is made scornfully to the sacrifice of a few mice and pigs in the attempt to prolong human life. As a matter of fact vivisectionists have created a new industry, the raising of animals in large numbers for use in the laboratory. Even children are bribed to take cats daily to one of our leading universities, while several hundred frogs, doves, rabbits, and dogs are disposed of in a few months by a single institution. The new Rockefeller Institute has a ninety-seven acre farm in New Jersey where arrangements will be made for the practicing of vivisection on an enormous scale. The purpose in stocking this farm with animals and fowls is to obtain increased facilities for scientific work, and to reduce the expense of obtaining animals from dealers and small boys who are now entirely unable to supply the demand of the Institute by capturing stray cats and dogs including without doubt many a loved pet from a happy home.

Another thriving business is the manufacture of apparatus for binding and holding as in a vise the bodies of animals about to be operated upon, from the big "kynolith," or dog-stone, for the powerful St. Bernard, to the tiny special tables for birds and frogs. This brings us to the question of anæsthetics. The truth in regard to their pretended use has been made known by men at the very pinnacle of the profession. Many doctors and surgeons acknowledge that in a long experience of laboratory work they never saw anæsthetics used or heard them hinted at. Dr. Hoggan says that anæsthetics have "proved the greatest curse of vivisectionable animals," — that the "public conscience was the thing anæstheticized, and not the animals." He also remarks that "complete and conscientious anæsthesia is seldom even attempted, the animal getting at most a slight whiff of chloroform, by way of satisfying the conscience of the operator, or of enabling him to make statements of a humane character." Dr. Walker gives the same evidence before the Royal Commission.

The use of curare, "the hellish wourali," as Lord Tennyson called it, which paralyzes motion but increases the animal's susceptibility to pain, is common. The sufferings so created are characterized by even M. Claude Bernard as "the most atrocious the mind of man can conceive."

The uselessness of all this agony is shown by the late Sir Benjamin Ward Richardson in his work on "Biological Experimentation," in which he says, "I am certain that vital experiments to have any value at all, must be conducted without any trace of the disturbing influence of suffering, whether man or lower animal be the subject of observation; nor do I stand alone in this view. I have heard it expressed by Sir Benjamin Brodie, Dr. Baly, Sir John Forbes, Dr.

W. B. Carpenter, and Dr. John Snow." Sir Charles Bell and Alexander Walker shared this view.

Dr. Richardson strongly opposed, also, experimental demonstrations to students. Dr. F. R. Marvin, of Albany, says that the man who can laugh or even smile at the agony of a dog will in time come to look with equal indifference upon the misery of the men and women who surround him.

Although these facts might be multiplied indefinitely, it would seem to be decisively proven by those already given on high authority that important discoveries have *not* been made by vivisection, that dexterity can *not* be acquired for work upon the human body by practice upon animals, and that on moral grounds alone such horrible practices should never be permitted for the sake of demonstration of facts before students.

Is this picture of cruelty overdrawn? Let us investigate a few well authenticated instances. Professor Mantegazza is said to have devised a machine which he appropriately called a "tormentor," in order to create as intense pain as possible. After driving numerous nails through the soles of the feet he applies his "tormentor" by which he can squeeze an ear or paw between the teeth of pincers. He boasts that he can tear or crush it in all sorts of ways. Two little creatures are subjected for two hours to the tormentor; then "larded with long, thin nails in their limbs . . . they suffer, and shut up in the machine for two hours more, they rush against each other and, not having the strength to bite, remain interlaced, with mouths open, screaming and groaning."

Dr. Leffingwell quotes an instance where it was desired to test the strength of maternal affection in a dog. A little spaniel was selected and tortured by every method known to science, and the little animal

persisted in licking her young. Then after living through seven experiments and having her breasts cut off "she still unceasingly licked the living and the dead puppy, and treated the living puppy with the same tenderness that an uninjured dog would manifest," in the words of the investigator, Professor Goltz, of Strasburg. What a noble discovery! And pray tell of what inestimable value to the *human* race? Have not instances of undying maternal love in the higher and lower animal kingdom stamped the pages of history and come into the experience of almost every sentient being? Truly the wisdom of Solomon does not suffice for this advanced generation of scientists!

On page 24 of Cyon's Atlas is Plate XV, showing a dog with salivary glands and the nerves supplying those glands exposed. A small pipe is fixed into the duct of the gland. The dog is muzzled, showing that the animal was living and conscious when the experiment was performed. M. Cyon says, "If the experiment is made for demonstration, one can drug the animal beforehand with chloral, chloroform, or curare, and if the last named poison is applied, artificial respiration must be used. If on the other hand, one wishes to use the experiment for purposes of observation, particularly if the investigation concerns the influence of the circulation on the activity of the glands, it is better to avoid those drugs, on account of their influence on the circulation. One should choose for the experiment strong, lively animals, which have been well fed for a few days previously." Curare, the reader will remember, is a poison which deadens all power of motion while the nerves are even more acutely sensible to pain than in the natural state, and chloral is in no sense an anæsthetic.



M. Paul Bert is proud that he can hold a dog by one paw; a stiffening produced by placing the victim for hours under compressed oxygen. The symptoms resemble at once a crisis of strychnine poisoning and an attack of tetanus, while sensibility is preserved. M. Bert says that "in lighter cases one may lift the animal by one paw like a piece of wood."

At Alfort, in France, is a veterinary college having the name "Horses' Hell," because of the excruciating experiments lasting many days, performed upon horses so tightly fixed in frames that "no anæsthetic is necessary," in the words of an attendant.

"To ascertain the excitability of the spinal marrow and the convulsions and pain produced by excitability, studies were made chiefly upon horses and asses," says M. Chaveau, "who," he says further, "lend themselves marvelously thereto by the large volume of the spinal marrow. . . . The animal is fixed upon a table. An incision is made on its back from thirty to thirty-five centimeters; the vertebrae are opened with the help of a chisel, mallet, and pincers, and the spinal marrow is exposed."

Canon Wilberforce says that a "practical physiologist" recently desired to ascertain whether it was possible to pour molten lead into a man's ear when drunk without causing him to shriek. For this purpose he procured several dogs, and the report says, "he administered an anæsthetic composed of a solution of chloral and morphine to reduce the dog to the supposed condition of a drunken man. In spite of this precaution, it appears that when the molten metal penetrated the ear of one of the animals, accompanied by a frizzling sound, the wretched beast struggled violently, and his howls

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were so dreadful that even the *garçons du laboratoire*, accustomed as they are to painful spectacles, were strongly affected." The second dog, though similarly anæstheticized, was so horribly tortured that it actually burst the thongs that bound it to the torture-trough."

The rabbit is a favorite victim of vivisectionists. This timid little animal appears frequently in M. de Cyon's "Methodik der physiologischen Experimente und Vivisectionen," with numerous other illustrations too blood-curdling, perhaps for general circulation.

Stoves for baking and boiling animals alive are among the valued assets of vivisectionists. For what result? Can any one from the profession tell?

Inoculation experiments come under the head of vivisection. Dr. Paul Gibier, a pupil of Pasteur, has shown how murder may be committed in a scientific way by a mere pin-prick transferring a culture from any one among a large number of deadly diseases. With their usual habit of self-contradiction and prevarication the vivisectionist-enthusiasts claim that there is no suffering in this same experiment of murder as applied to dumb animals.

Let us see:

A dog is inoculated with the blood of a diseased mule and dies after three weeks of suffering.

Another dog lives a month after inoculation.

Another becomes a living skelton.

Monkeys similarly inoculated show the same results. In all, twenty different animals are inoculated by one experimenter in order to find out whether *one* or *two* species of parasites infected the mule, and the operator states that, "In face of all the evidence which has been accumulated . . . one is not justified in putting forward any theory."

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Dr. Leffingwell said that after a visit to the Pasteur Institute, where over 2,000 rabbits were awaiting their fate, and a large number of dogs tearing at their chains filled a vast cage, what most impressed his memory, were the scores of rabbits lying in their compartments slowly dying, the result of inoculations which are claimed to involve less suffering than the administration of an anæsthetic.

A London scientist, Klein, freely stated that he had "no regard at all for the animals he vivisected," as is proven by his experiments in inoculating the eyes of cats with the virus of diphtheria, recording that in one case the experiment lasted until the eye became perforated.

Legislation has been refused in America to restrict and prevent such cruelty. Why? Probably because Congressmen are beset by well-sounding statements and appeals from vivisectors asserting painless methods and humane killing of their victims. The exposure of prevarication and deception comes from the medical profession, the noblest of whom denounce the practice of vivisection as only men learned in its scientific detail as well as its miseries can denounce it.

"I recall to mind," said Dr. Latour, "a poor dog, the roots of whose vertebral nerves Magendie desired to lay bare, in order to demonstrate Bell's theory which he claimed as his own. The dog, mutilated and bleeding, twice escaped from the implacable knife, and threw its front paws around Magendie's neck, as if to soften his murderer and ask for mercy." He adds, "I confess, I was unable to endure the spectacle."

And do the public believe such instances are rare?

Shortly before his death, England's great surgeon, Sir Lawson Tait, in the presence of a distinguished audience proposed a resolu-

tion denouncing experimentation on living animals as "crude in conception, unscientific in its nature, and incapable of being sustained by any accurate or beneficent results applicable to man. Such experiments never have succeeded and never can, and they have, as in the case of Koch, Pasteur, and Lister, not only hindered progress, but they have covered our profession with ridicule."

Dr. George Wilson, LL.D., the leading authority in Great Britain upon Preventive Medicine, said in an address before the British Medical Association, "I have not allied myself to the Anti-Vivisectionists, but I accuse my profession of misleading the public as to the cruelties and horrors which are perpetrated on animal life." He said in regard to the use of the so-called toxins, "There is long-drawn-out agony. The animals so innocently operated on may have to live days, weeks, or months, with no anæsthetic to assuage their sufferings, and nothing but death to relieve."

And vivisectors claim that no law shall decide how much pain may be inflicted upon these, God's creatures. The whim, fancy, or individual brutality of the operator is the only limit set to his work. The attempt to obtain criminals for human vivisection is a direct outcome of the growth of unlimited experimentation in this country. Here we see the scientist blinded by egoism to the actual moral rights of even a human being, and strangely bigoted as to the value of his investigations. Should he be the only man to judge himself? Should he be free from the law that binds all other men?

Prof. John B. Watson's recent experiments on rats at Chicago University, undertaken to discover if rats have a sixth sense, is fresh in the minds of all readers of the daily papers. Of what ad-

vantage is it to man to know that a rat will slip through a winding maze without eyes or olfactory nerves, and with feet frozen and head covered with collodion? The human race must be moving backwards if it is necessary at this stage of development to grope by means of a sense of direction.

The public are unenlightened in regard to the meaning of the term, vivisection, having been led to believe the various prevarications and quieting denials of the medical profession.

Just take the trouble to look at a book written by Dr. George W. Crile, dealing with "Experimental Research into Surgical Shock." Descriptions, too horrible to repeat in this article, abound. On page 31 it is stated, in describing an experiment, that "the dog became profoundly under the influence of the anæsthetic by mistake, as that part of the operation was *overlooked*." Other experiments mentioned are: "The tearing and twisting of the sciatic nerve," "Extirpation of an eye and rude manipulation and bruising of the socket," "Forcing air and then water into the stomach until it finally bursts, forcible dilatation of lower bowel by opening blade of large scissors," "Applying a large gas flame to posterior extremities, and a Bunsen flame to the nose," "Putting the hind feet in boiling water," "Holding the nerve trunks with one forceps, while they were grasped peripherally by another and roughly torn off." These are only a few of the horrors described in this book.

In the *Boston Medical and Surgical Journal* is an article by Dr. Crile entitled, "A Research into the Means of Controlling the Blood Pressure," describing a series of over 200 experiments. The following is a quotation from the article by Dr. Crile: "That the vasomotor centre becomes exhausted in complete shock is indicated by

the absence of any rise in the blood pressure on electrical stimulation of the sciatic nerve, or burning the paw, etc." The means of reducing the animals to this degree of shock are too painful for repetition in these pages. On page 249 he says, "An ordinary laboratory dog was decapitated. Adrenalin and saline solution were immediately and continually administered. It was found that the blood pressure could be controlled at will. The beheaded animal lived ten and one half hours." Again, "The circulation and respiration in dogs, electrocuted by a shock of 2,300 volts of an alternating current, were re-established." These instances simply indicate the nature of the 200 experiments described by Dr. Crile. These and others equally revolting are being tried daily right here in our own country. Unfortunately it is here that the Rockefeller Institute has been endowed for purposes of just such experimentation, where an indefinite number of animals are already suffering a slow tortuous death and others will perish in untold agony in the name of science.

It was an American professor who performed the following experiment before a Medical Congress in Berlin. A dog carefully muzzled was brought into the room, having its legs bound down. The professor pumped the animal full of sulphuretted hydrogen gas to which he set fire as it issued from the mouth in a stream. He then fired a bullet into the creature's abdomen and repeated the gas injection. The completion of the experiment was admitted to be too horrible to be given even in a medical journal.

In *Lippincott's Magazine* is an article by Dr. Albert Leffingwell, in which he says, "There is a certain experiment, one of the most excruciating that can be performed, which consists in exposing the spinal cord of the dog for the purpose of demonstrating the function

of the spinal nerves. . . . This experiment, which we are told surpasses even the callousness of Germany to repeat; which every leading champion of vivisection in Great Britain reprobates for medical teaching; which some of them shrink even from seeing themselves, from horror at the torture necessarily inflicted; which the most ruthless among them dare not exhibit to the young men of England, — this experiment has been performed publicly again and again in American medical colleges!"

Canon Wilberforce said, in reply to a criticism of his own candid statements on this subject, "The brutalizing effect of practices of this kind upon the youth of our time is incalculable." Is it strange that horrible murders and atrocious cruelties fill the columns of our daily papers when the very flower of knighthood, as represented by those who claim to be seeking to serve their fellowmen, spends its choicest years in scenes of such heartrending suffering inflicted by themselves in cold blood and to no purpose?

Recently vivisectionists have been fighting a bill before the New York State Legislature providing for the reasonable restriction of experiments in vivisection, but not one of them ventured to cite a single experiment which is now believed to have resulted in any discovery of value to humanity.

This bill, entitled, "An act to prevent cruelty by regulating experiments on living animals," provides that such experiments shall be attempted only under the authority of the faculty of a college or university incorporated under New York State laws, or under the authority of the State Commissioner of Health or a City Board of Health. The place where the experiment is conducted must be registered with the State Health Commissioners, who shall license

the holder to pursue animal experimentation. Before and during the experiment the animal must be completely under an anæsthetic. "If pain is likely when the effect of the anæsthetic has ceased, the animal must be killed immediately." The further provisions of this bill simply confine the practice to scientific hands, and prevent needless suffering, and yet the devotees of vivisection are unwilling to be hampered by restrictions which do not in the slightest degree prevent their self-defined aims, but do prohibit useless and outrageous experimentation.

We have seen that the most learned members of the medical profession declare that what were their boasted successes ten years ago mean nothing to the working knowledge in medicine to-day.

We have seen also that inoculation experiments breed disease for the human race.

We have discovered that the boasted extension of knowledge of the functions of the human body by vivisection is altogether without foundation, and that death to human beings has frequently resulted from deductions made by study of the lower animals, and that vivisection is now, by a rapidly increasing number of the medical profession, called "the disgrace of science."

We have frequent and abundant testimony of the most enlightened thinkers that the checking of contagion and preventing of epidemics is insured by a study of principles of cleanliness and the common laws of hygiene, and in no other way.

It has been shown in a limited number of cases, which might be multiplied indefinitely, that vivisection is almost invariably cruel in the extreme.

In reply to the assertion of vivisectionists that there is no moral wrong in vivisection "to animals, operators, or spectators," we would

ask their definition of moral responsibility in this universe of which we are a part. The animal creation wars upon itself, tearing each other limb from limb with savage cruelty and suffering which even the most hardened of the human race shrink from witnessing. For two thousand years we have been learning to consider ourselves superior to those other fellow beings because ruled by an instinctive spiritual law of love which separates us from creatures less beneficently endowed. Does this law of love permit that thousands of our so-called scientists and investigators shall day by day commit atrocities more outrageous than those of the animal creation, because the cruelties in the animal world are incited by unreasoning hunger and the instinct of a self-preservation, while these refined latter-day tortures are perpetrated with cool calculation by contrivances more viciously cruel than the torments of the Inquisition?

Is it a wise adjustment of civil authority that a large number of students should be trained to consider themselves exempt from the arm of the law? When a throng of unrestrained young fellows, standing for the best culture of our land of liberty, express their displeasure by a bombardment of missiles however harmless, the innate principle of lawlessness is just as surely present as when a vicious, raging mob of the worse inherited passions of human nature voice their fury by hurling dynamite at the representative of a governing power which irritates them. Can we afford to allow the moral sense of our youth to be gradually crushed out by sanctioning a pitiless and demoralizing practice? It would be better indeed to die of lock-jaw, diphtheria, tuberculosis, cancer, scrofula, or all combined than to be responsible for such offence. For it is said in Holy Writ of such an one, "Woe unto him by whom the offence cometh. It

were better for him that a millstone were hanged about his neck and that he were drowned in the depth of the sea."

The writer of this paper has received an impression of pain and suffering, of nameless torture and agony in the kingdom that we are appointed to rule over, which will not fade. Is this feeling what the vivisectionist calls "sentimentalism," or "bigotry?" I think not.

When a subject has become so excruciatingly distressful that one may not even consider it without personal suffering, is it not time to face the problem and strive vigorously to eliminate this disgraceful blot upon our triumphant progress in *civilized science*?

*Springfield, Vt., 1908.*





